Delay Tolerant Networks (DTNs) are not directly connected networks. Delay Tolerant Networks have high latency, long queuing time, limited resources and intermittent connectivity. In development, Message Ferry (MF) is one of other scheme in DTNs to provides efficient data delivery. In the MF scheme, MF move proactively to send and receive messages so can to reduce delay. Use of Multi-Constraint Ferry Routing (MCFR) scheme make optimization result but with next hop algorithm from MCFR scheme can not give troubleshoot if destination node can not receive message from MF. This case will disturb delivery route for other message and make higher delay.

In this research, the authors propose new scheme for troubleshooting from MCFR use priority level with labeling for each undelivered message. The split message can reduce delay from effect dynamic conditions of destination node. Calculation of the test is to measure the level of delay and throughput message from scenarios using MCFR method and proposal method.

Keyword: Delay Tolerant Networks, Message Ferry, Multi-Constraint Ferry Routing, next hop algorithm, priority level.